

ABSTRACT OF DISCLOSURE

A molecular recognition layer 21 is formed on a sensor face 6a of a chemical CCD 1 having such a structure that a plurality of potential wells 6 constituted to change a depth corresponding to a chemical quantity are arranged two-dimensionally, electric charges are injected into the potential wells 6, and the chemical quantity is converted into an electric charge corresponding to the sizes of the potential wells. Thus, it is provided a novel and useful molecular recognition type chemical CCD capable of measuring an ultramicro chemical substance with an ultrahigh sensitivity at a molecular level.